

AMENDMENTS TO THE CLAIMS

1-9. (Canceled)

10. (Currently amended) A method of fabricating an electronic structure which comprises forming an insulating material on a substrate;
lithographically defining and forming recesses for lines and/or via having sidewalls and bottom surface in the insulating material in which interconnection conductor material will be deposited;
depositing a barrier layer on sidewalls and bottom surfaces of the recesses;
providing an electroplating bath comprising:

a source of cupric ions,

a complexing agent,

cyanide ions,

a stabilizing agent,

and a pH of at least 12.89;

providing an electrical current sufficient to provide a current density of from about 5 to about 25 milliamps/cm²; and

electroplating copper directly on said barrier layer.

plating copper directly on the barrier layer by electroplating from a bath having a pH of about 12.89 or greater, a source of cupric ions and a complexing agent and at a current density of about 5 to about 25 mA/cm², ~~μA/cm²~~.

11. (Original) The method of claim 10 wherein the copper is deposited to provide a thickness of about 10 nanometers to about 100 nanometers.

12. (Original) The method of claim 10 wherein the copper is deposited to provide a thickness of about 20 to about 50 nanometers.

13. (Original) The method of claim 10 wherein the barrier layer is selected from the group consisting of tungsten, alloys of tungsten, titanium, alloys of titanium, titanium nitride, tantalum, tantalum nitride and tantalum silicon nitride.

14. (Original) The method of claim 10 wherein the barrier layer has a thickness of at least about 4 nanometers.

15. (Original) The method of claim 10 wherein the barrier layer is tungsten.

16. (Original) The method of claim 10 wherein the dielectric is silicon dioxide.
17. (Previously presented) The method of claim 10 wherein the recesses have an aspect ratio of greater than 3:1.
18. (Original) The method of claim 10 wherein the electroplating bath is at a room temperature of about 22° C.
19. (Previously presented) The method of claim 10 wherein the source of cupric ions is CuSO_4 , and the complexing agent is EDTA or a salt thereof.
20. (Original) The method of claim 19 wherein the electroplating bath comprises sodium hydroxide or potassium hydroxide.
21. (Previously presented) The method of claim 10 wherein the electroplating bath further comprises a ~~stabilizer and~~ surfactant.
22. (Currently amended) The method of claim ~~[[21]]~~ 10 wherein the stabilizer is 2,2' - bipyridyl.
- 23-28. (Canceled)
29. (Previously presented) The method of claim 10 wherein said current density is 10 to about 20 mA/cm^2 .
30. (Currently amended) The method of claim 29 wherein ~~the depositing of the copper is carried out at a rate of about 5 to~~ said current density is about 15 milliamp/ cm^2 . [[20mA/ cm^2 .]]
31. (Canceled)